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Conversions of Hydraulic Conductivity, Intrinsic Permeability and Transmissivity

A. Hydraulic Conductivity, K [L/T], and Intrinsic Permeability, k [L^2]

	K								*k*		
	cm/s	*m/s*	*m/day*	*ft/s*	*ft/day*	*ft/yr*	*USgpd/ft²*	*UKgpd/ft²*	*darcy*	*cm²*	*ft²*
cm/s	1	1.00E-2	8.64E2	3.28E-2	2.83E3	1.03E6	2.12E4	1.77E4	1.16E3	1.15E-5	1.24E-8
m/s	1.00E2	1	8.64E4	3.28	2.83E5	1.03E8	2.12E6	1.77E6	1.16E5	1.15E-3	1.24E-6
m/day	1.16E-3	1.16E-5	1	3.80E-5	3.28	1.20E3	2.45E1	2.04E1	1.35	1.33E-8	1.43E-11
ft/s	3.05E1	.305	2.63E4	1	8.64E4	3.15E7	6.46E5	5.38E5	3.55E4	3.50E-4	3.77E-7
ft/day	3.53E-4	3.53E-6	.305	1.16E-5	1	3.65E2	7.48	6.23	.411	4.06E-9	4.36E-12
ft/yr	9.66E-7	9.66E-9	8.35E-4	3.17E-8	2.74E-3	1	2.05E-2	1.71E-2	1.13E-3	1.11E-11	1.20E-14
USgpd/ft²	4.72E-5	4.72E-7	4.07E-2	1.55E-6	.134	4.88E1	1	.833	5.49E-2	5.42E-10	5.83E-13
UKgpd/ft²	5.66E-5	5.66E-7	4.89E-2	1.86E-6	.161	5.86E1	1.20	1	6.60E-2	6.51E-10	7.01E-13
darcy	8.58E-4	8.58E-6	7.42E-1	2.82E-5	2.43	8.88E2	1.82E1	1.52E1	1	9.87E-9	1.06E-11
cm²	8.70E4	8.70E2	7.51E7	2.85E3	2.47E8	9.00E10	1.84E9	1.54E9	1.01E8	1	1.08E-3
ft²	8.08E7	8.08E5	6.98E10	2.65E6	2.29E11	8.36E13	1.71E12	1.43E12	9.41E10	9.29E2	1

The relation between units of K and k is temperature dependent: these factors are for 60° F.

B. Transmissivity [L^2/T]

	m²/s	*m²/min*	*m²/day*	*ft²/s*	*ft²/day*	*USgpd/ft*	*UKgpd/ft*
m²/s	1	6.00E1	8.64E4	1.08E1	9.30E5	6.96E6	5.79E6
m²/min	1.67E-2	1	1.44E3	1.79E-1	1.55E4	1.16E5	9.65E4
m²/day	1.16E-5	6.94E-4	1	1.25E-4	1.08E1	8.05E1	6.70E1
ft²/s	9.29E-2	5.57	8.03E3	1	8.64E4	6.46E5	5.38E5
ft²/day	1.08E-6	6.45E-5	9.29E-2	1.16E-5	1	7.48	6.23
USgpd/ft	1.44E-7	8.62E-6	1.24E-2	1.55E-6	1.34E-1	1	.833
UKgpd/ft	1.73E-7	1.04E-5	1.49E-2	1.86E-6	1.61E-1	1.20	1

Enter either table at the left with the given unit: move right to the column of the unit to be derived; read the conversion factor as a multiplier.
Example: to convert 2.1 ft/day (hydraulic conductivity) to cm/s: 2.1 ft/day × 3.53E-4 = 7.4E-4 cm/s.
Conversion factors are given in FORTRAN/BASIC notation; thus 3.53E-4 = 3.53×10^{-4}.